KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



WHETHER AT HOME OR THE HANGAR



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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

FROM THE DASAF
READINESS BEGINS WITH YOU

This month marks our nation's 238th birthday, and while that might seem like a long time, we're still young compared to many countries around the world. What's helped set us apart and make us a global power in just a couple centuries, however, has been the dedicated service and sacrifice of our military members. Thank you for what you do every day to ensure our freedoms endure!

Many of you will celebrate the Fourth of July with a long weekend and enjoy further getaways with Family and friends now through the end of summer. As you do, I ask that you reflect on your importance to the Army and the influence you have on your battle buddies, whether good or bad. While accidental fatalities are overall about on par with last year's figures, a worrying increase in personnel injury-other deaths and the continuing upward trend in fatal motorcycle mishaps threatens to derail the progress you've all worked hard for these past few years. I know you don't want that to happen, and you need to realize the power you have in making sure it doesn't.

Several Soldiers killed in this year's PI-O accidents (mishaps like drownings or falls during hikes or after a night of drinking) were not alone when they died. Usually, at least one other Soldier was with them during the accident. "Was there anything I could have done for my friend?" is a question that will probably haunt them for a very long time. Taking care of our battle buddies is a deeply engrained Army value that has saved Soldiers in conflicts throughout American history, especially so in Iraq and Afghanistan. Indeed, the roster of our most recent Medal of Honor recipients reflects the selflessness and dedication of leaders to their Soldiers and Soldiers to one another.

As a value, that feeling of obligation — our sense of duty — shouldn't end once we leave the war zone or post at the conclusion of the workday. Even when we're having fun, we still have a responsibility to never leave a fallen comrade, even if he or she is "fallen" in the sense of incapacitation by alcohol or taking unnecessary risks on the water. A Soldier lost to an accident is no less a tragedy than one killed by enemy action, and each loss affects unit readiness equally. All Soldiers are an integral part of their unit, which is an integral part of our Army, which is a critical part of our nation and the world as a whole. There is no such thing as "just one Soldier out of a million." Instead, we have a million unique reasons to play it safe in everything we do: our brothers and sisters in uniform, and by extension, their Families and the citizens we're sworn to defend. Safety equals readiness, and readiness equals you. It's really as simple as that.

Again, please take just a few moments to consider how you can make your holiday and the rest of summer safer for yourself and your battle buddies. Poor decisions can be corrected before they end in heartbreak, so give yourself credit for the impact you have on safety. Tragic outcomes aren't inevitable or a cruel twist of fate, and you can often prevent them with the most minor of words or actions. Whether what you do saves a battle buddy under fire, one who's too drunk to drive, or another who exhibits immature or even dangerous tendencies when operating a vehicle or motorcycle, you've done your duty.

Thank you again for all you do on behalf of this great nation, and please enjoy her birthday as you would your own. It's yours to celebrate, but remember to always play it safe.

Army Safe is Army Strong!

TIMOTHY J. EDENS
Brigadier General, USA
Director of Army Safety

WHETHER AT HOME OR THE HANGAR

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Although many years have passed, I distinctly recall the practical exercise on changing a tire as a young private just starting my military career. The reason why this memory stands out is due to a run-in with a particularly loud and brash drill instructor that happened to see me working without eye protection. The ensuing 15-minute PT session ensured I learned one thing — personal protective equipment is important.

About a decade later, just after flight school, I began to notice that I was now a bit more safety conscious about certain things than I had been in the past. I take flying seriously and have always incorporated safety into all of my duties. As I became more aware of the safety measures I was taking as a Soldier, I also started to incorporate those same measures at home. Those safety measures are what saved my vision. Here's how.

My unit was about 30 days away from our next deployment to Iraq, and the list of fix-it chores around the house was growing. One of the issues I was tackling was a leaky basement window. The wooden frame around the window was rotten, and when it rained, water from the driveway poured into our finished basement. My plan was to remove the window, tear out the old frame and then put it back together with treated lumber.

After spending the morning gathering the needed supplies and tools, I donned my eye protection and started the destruction process. One of the tools I was using that day was a 15-inch steel pry bar. It came in handy after I removed the window and started to pry loose the rotten wood around the frame. Most of the pieces came out without too much pressure, but, of course, there's always that one stubborn piece that refuses to budge. In this case, that stubborn piece was the 36-inch-long block of wood seated (firmly, I might add) horizontally across the bottom of the frame and fastened to the cement with sinker bolts.

I'd tried to remove the bolts with a ratchet, but they were so old that the heads of each one snapped off with any reasonable amount of force. I then moved on to Plan B, wedging the pry bar under the wood and forcing it free. Being that this was a basement window, the lowest point of the frame sat right at the six-foot mark from the floor. As I tried to get an angle that allowed me to use as much leverage as possible, I found myself directly under the tool with my foot braced against the wall. After a few minutes of applying steady pressure with no luck, I decided my next course of action was to yank on the pry bar in a bouncing motion to use my body weight. On the fourth or fifth bounce, it happened.

The wood gave way right as I was applying the maximum amount of pressure on the bar. I came crashing down on the floor with pieces of wood landing around me. Stunned disbelief quickly turned to shock when I realized the pry bar was still in my hands and the claw end firmly embedded in my nose!

I took off my safety glasses, gently removed the pry bar from my nose and applied pressure to the wound. I then made my way upstairs — rather calmly, I must say — and went to the bathroom to assess the damage to my face. My fears were confirmed when I looked into the mirror and saw my nose had shifted considerably to the left side of my face. To make matters worse, there was also an almost three-inch gash where my nose had once been.

I grabbed a clean hand towel and reapplied pressure as I pondered my next step. Obviously I needed medical aid, but since we lived in a fairly rural area, that meant I'd have to call 911 and then wait about 15 minutes for the volunteer fire department to arrive. Rather than wait for assistance, I just drove myself to an emergency room a short distance away. It took about an hour for the doctor to properly clean the wound and glue it shut. I was lucky. My nose was broken, but that and the large cut on my face was the extent of the damage.

Later that evening, when I recreated the accident to explain to my wife what had happened, I noticed the safety glasses. Dead center on the right lens was a two-inch gash that started just above the eye and ran down to the bottom, toward the bridge of my nose. The glasses worked as advertised and deflected the blow away from my eye. That's when it dawned on me that had it not been for the safety glasses, I probably would have lost my right eye, or worse.

I consider my incident as a lesson learned. I did contribute to national accident statistics due to my fall, injury and hospital visit, but it could have been much worse. Next time you decide to work around the house, remember this: PPE has its place during all jobs, whether at home or the hangar, no matter how trivial the work may seem.

Did You Know?

July is officially recognized as Eye Injury Prevention Month. For more information, visit the U.S. Department of Health and Human Services' Federal Occupational Health website at http://www.foh.dhhs.gov/public/nycu/eyeinjury.asp.

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THE INVISIBLE ENEMY

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Every year, the Army loses Soldiers during the summer months to an invisible opponent — heat. Fortunately, these needless losses and other heat-related injuries can be prevented by the application of risk management.

The nature of our business requires Soldiers to always be prepared to operate in severe weather conditions with extreme temperatures; however, heat injuries can occur even when temperatures aren't extreme. The cumulative effects of strenuous activity over time can result in a Soldier becoming a heat casualty during low-risk conditions. Leaders must remain engaged in order to provide the best protection for our Soldiers, and the best protection is prevention.

There are several control measures that will aid in heat-injury prevention, including monitoring wet bulb temperatures; paying closer attention when temperatures rise or when mission-oriented protective posture suits are worn; adjusting work and rest schedules; ensuring Soldiers are acclimated; conducting briefings on heat injury symptoms; checking Soldiers' activities throughout the day; taking into account earlier exposure to environmental heat and possible dehydration; and using the buddy system.

Another control measure several units have implemented is the use of a Soldier tracking system, which is capable of providing real-time tracking. The Soldiers' movements are monitored and displayed by a system that uses GPS information provided by the Soldiers' player unit radios and transmitted to a transportable relay radio. The position reports are then routed through computers to workstations that display the Soldiers' positions on an aerial overlay of the land navigation area. The system is contained and does not rely on a web-based interface.

In addition to prevention, it is critical leaders and Soldiers are able to identify and initiate the appropriate treatment measures for the different types of heat injuries. The most severe heat-induced illnesses are heat exhaustion and heat stroke. If action is not taken to treat heat exhaustion, the illness could progress to heat stroke and possibly death. To help avoid heat-related injuries, leaders and Soldiers should:

Drink plenty of fluids. In hot environments, it's possible for the body to lose one liter of fluids per hour. Thirst is not a good indicator of fluid loss. Don't wait until you're thirsty to drink.

- Be aware of their environment. If you work in the heat or around heat sources, take whatever steps are possible to control the heat externally. It's also recommended that ice sheets are readily available during high-risk activities to reduce the severity of a heat injury.
- Take frequent breaks. As the temperature increases, more frequent breaks are needed to stay cool.
- Wear proper clothing. Loose, lightweight fabrics encourage heat release.
- Acclimatize. It takes at least seven to 10 days to adjust to working in a hot environment.
- Stay in shape. A healthy heart and good muscle tone work more efficiently and generate less heat.
- Eat light during the workday. Hot, heavy meals add heat to the body and divert blood flow to aid with digestion. Normal dietary intake typically replaces all salt lost during the day, so there is no need to take salt supplements.
- Be aware of special heat stress risks. Caffeine, alcohol, diabetes or medications for high blood pressure and allergies can increase the risk of heat stress.

Risk management should be a continuous process applied across the full spectrum of Army training and operations. Through the engagement of our leaders, we can help ensure our Soldiers remain fit to fight.

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WHEN YOU'RE HOT, YOU'RE HOT

DAVID L. HOUGH
www.soundrider.com

The ride south over the Siskiyou Mountains from Oregon to California started out cool enough. Up at 4,000 feet, it was chilly enough that I was glad I had added the jacket liner and neck warmer. But 100 miles later, as I descend into the Sacramento Valley, the temperature begins to soar. By the time I reach Oroville, the temperature signs are flashing 118 F. It's another 150 miles to the rally site at Mariposa in triple-digit temperatures.

A rider passes by in the opposite lane, jacket bungeed on the back, bare chest exposed to the hot blast. I wave, but there is no response. His exposed skin is red, and he doesn't even appear to have noticed me, a bad sign that he's on the fringe of heat exhaustion. I don't wish any problems on a fellow motorcyclist, but there are lots of riders who have to contribute to the statistics before they crack the code.

To continue the ride, I go into hot weather survival mode. Full riding gear, including riding pants, leather boots and gloves and a knit neck "cooler" saturated with water. As quickly as the fabric dries out in the blast-furnace wind, I flip the face shield open, squeeze a gusher of water down my chin and slam the face shield shut again. The water dribbles down to wet the neck cooler and my shirt inside the jacket. About 10 seconds after the water penetrates the neck cooler, it cools from evaporation in the hot air and sucks some heat out of my neck.

I stop at a fast-food outlet every few miles to replenish the water bottle with ice and water. Whether riding or stopping for water, other people stare at me in disbelief. Peering out of their air-conditioned cars, or sitting in an air-conditioned restaurant, they just can't understand how anyone could tolerate being outside during a heat wave, bundled up in heavy riding gear.

Your body has automatic "thermostats" to protect the core organs from heat stress, including sweating, vasodilatation, increased heart rate and reduction of blood pressure. If these tactics don't keep core temperature within the redline, the body gives you warnings such as heat cramps. If you don't take care of the problem, it gets more serious, including heat exhaustion and heat stroke.

Sweating

The body has sweat glands to keep the skin damp. The evaporating sweat sucks heat from the skin and transfers it to the air. Of course, sweat is primarily water, so it's critical to keep replenishing the supply. That's one reason why we need to drink about a pint of water every hour during hot, dry conditions. One problem for motorcyclists is that at highway speed, the sweat glands may not keep up with the evaporation. Or, if the sweating uses up too much water, your body temperature regulating system goes on the fritz, like a dry battery.

Vasodilatation

To help cool down the core, blood vessels enlarge to circulate more blood (and therefore body heat) toward the skin. If ambient air temperature is lower than body temperature, excess heat can be absorbed by the air. But if the air gets hotter than the skin, the increased blood flow simply soaks up more heat from the air and pumps it back to the core.

Heart rate and blood pressure

The heart responds to increasing heat (hyperthermia) by increasing the heart rate to pump more blood into those enlarged blood vessels. As the air temperature rises, heart rate (pulse) can increase 50-70 percent faster than the normal resting rate. The increased flow causes blood pressure to drop, and blood flow is shunted away from muscles and brain, toward the skin. Consider the implications of those changes on a motorcyclist. The lowered blood pressure reduces muscle control and brain activity, and more blood is pumped toward the skin — where it is vulnerable to road rash

Symptoms of trouble

The human body won't take much of an increase in core temperature without complaining. The symptoms of overheating are leg cramps, tired muscles, headaches, dizziness and even fainting. The various symptoms are trying to tell you how overcooked you're getting.

Heat cramps
Muscle cramps caused by heat usually affect the legs and lower abdomen first, then the arms. Heat cramps are a symptom that the body's electrolytes are running low. It's not smart to ignore muscle cramps. Find some shade and take a break. Sip water or a sports drink. Exert firm pressure or massage the cramped muscles to relieve the spasms. If you're still in pain, the recommended first aid dose is one-half teaspoon of table salt per half glass of water every 15 minutes.

Heat exhaustion
Heat exhaustion occurs as the body continues to shunt blood away from the brain and muscles. Symptoms of heat exhaustion include:

- Headaches, dizziness, nausea, momentary fainting
- Cramps
- Tiredness, weakness
- Profuse sweating
- Pale, clammy skin
- Approximately normal body temperature

If you begin to feel these symptoms during a desert ride, take immediate action before you pass out.

- Get into some shade, preferably into an air-conditioned room.
- Loosen clothing and wet down your skin or undershirt to increase evaporative cooling.
- Slowly sip water or a salt water solution, the same dose as for heat cramps. Avoid alcohol or caffeine.
- If you feel faint, lie down and get your feet raised above head level.
- If you can't keep the salt water down, get emergency medical aid. You may need an intravenous salt solution.

Even after you begin to feel normal again, consider staying out of the heat for a day or two. Your body needs some time to recuperate. If you are on a long trip, consider a 24-hour layover in the next air-conditioned motel.

Heat stroke
If you experience heat exhaustion and just try to tough out the heat without getting cooled down and rehydrated, the body thermostats will begin to fail. Core temperature continues to rise (may go as high as 106 or 107 F), sweating stops, the heart beats even faster and you may pass out. If you are coherent enough to recognize the symptoms, immediately get medical aid while you are still mobile. And watch your riding buddies for any of the following heat stroke symptoms:

- Victim incoherent, staring vacantly, blanking out or unresponsive
- Skin hot, red, dry (no perspiration)
- Rapid pulse
- Body temperature elevated

Yes, heat stroke is life threatening. It's a medical emergency. Don't be bashful about calling 911 for assistance. In the meantime:

- Get the victim into some shade, out of riding gear and cooled down by any means available. If possible, get the victim into an air-conditioned room or use fans to help provide evaporative cooling.

- Repeatedly sponge skin with cool water or rubbing alcohol. Apply cold packs or ice cubes if you can get them. The goal is to get body temperature below 102 F.

- Don't give the victim any stimulants, especially not any alcoholic beverages.

- If the victim's temperature begins to rise again, repeat the cooling process.

- As soon as possible, get the victim to emergency treatment.

Avoiding the ugliness

Even after a heat stroke victim has been cooled down and rested, the ugliness isn't over. It's not uncommon to have intestinal upset for a week or so, with food coming out both ends of the pipe. I know you'd rather avoid that sort of ugliness.

People from cooler climates often react to hot weather by removing clothing. That helps cool the skin — providing air temperature is less than body temperature. Heat transfers from a hot object to a cold object. Pick up an ice cube and it feels cold. What's happening is that the ice is rapidly absorbing heat from your skin. Even if the air is 89 F, it will absorb heat from your skin (assuming your body is about 99 F). Now, consider what happens when you curl your fingers around a hot cup of coffee. Your skin rapidly absorbs heat from the cup, because the cup is hotter than your hand. The same thing occurs when the air temperature is hotter than your body temperature.

You may think your body is hot at 99 F, but it's cold compared to air at 118 F. If you expose your skin to air that's hotter than you are, your body just soaks up more heat. The lesson here is that if air temperature is in the 80s or 90s, it helps to open up the jacket vents, or wear a mesh jacket. But once air temperature climbs above 99 F, the best way to keep from getting cooked is to keep your insulation on and the vents closed. Desert nomads wear long, loose wool garments, both to keep the sweating skin in the shade, and to insulate the body from the hot air.

With the temperature in triple digits, I wear my leather gloves and insulated riding boots. My feet are down in the air stream that's first been heated up by the pavement, and then heated some more by the engine. Are my feet hot? Sure, but not as hot as if I were wearing thin boots or shoes that exposed my ankles.

Same for the helmet. Wouldn't it make sense to crack my visor when it's really hot, or at least open up the helmet vents? Nope. Any hot air allowed to reach my skin will heat up the skin, not cool it down. Inside my helmet at 118 F I'm sweltering, but the temperature is probably under 100 F. That crushable helmet liner inside the shell is there to cushion my brain against impacts, but it's the same expanded polystyrene foam they use to make insulated picnic coolers. So, the helmet actually provides insulation against the hot air.

One additional concern about exposed skin is sun and wind burn. Even if you wear heavy-duty sunscreen to protect against a nasty sunburn, the wind at motorcycling speeds can also irritate the skin. If you're riding more than a few miles, it's best to keep your skin covered.

Evaporative cooling

More physics now. When water evaporates, it cools down. Blow hot air through a wet bandana, and the bandana cools down. Cooling the skin cools the blood, which cools down the whole body. Evaporative cooling works best on areas of the body where there are large blood vessels close to the skin, such as the groin and neck. A motorcyclist's groin is too close to the engine and too far out of the air stream. That's why wearing something wet around your neck is so important.

The bad news is that evaporative cooling only works well in dry climates. When the humidity is already high, (you're 99/99 in Missouri in August — 99 F and 99 percent) neither perspiration nor the water in your neckband evaporate very well. Limited evaporation, limited cooling. But, of course, there is shade in Missouri, so the best tactic may be to simply take more breaks in

humid climates. Or, you can ride early in the morning when it's cool and rest in the shade in the afternoon.

For those of us riding in the deserts of Washington, Oregon and California, the air is relatively dry, so evaporative cooling works very well. A wet bandana around your chin will cool you for a few minutes, but the hot wind blast will quickly evaporate all the water. You need to keep replenishing the water every few minutes. Better yet, wear thicker fabric that holds a lot more water.

Keep your tank full

The other important tactic for hot weather is to drink lots of water, to replenish your electrolytes and refill your sweat glands. We're talking at least a pint per hour. Exercise drinks containing electrolytes (salts) are acceptable, unless you have high blood pressure. And flavored drinks may be very high in sugar. Carbonated soft drinks are better than nothing, although it would be best to get the water without large doses of salt, sugar and chemicals. Almost all grocery and convenience stores have chilled filtered water in plastic bottles, handy for both drinking and wetting down your bandana.

More than a few riders carry a water bladder, such as a Platypus carried on the back in a fabric holster or in a jacket pocket. Some water bladders can be pressurized with small pumps, and evaporative cooling wrappers are available to help chill the bladder. You can also find water bladders at some sporting goods stores.

In hot weather, avoid alcoholic drinks. Obviously, alcohol reduces judgment. What's not so obvious is that alcohol stimulates abnormal heartbeats, depresses the pump function of the heart and actually dehydrates the body. Alcohol does all the wrong things for a motorcyclist in the desert.

So, when it's really hot, keep on your jacket and soak down your T-shirt. Wear a wet neck cooler and keep dribbling water on it. If you're getting too hot or start feeling any hints of muscle cramps or heat exhaustion, don't just keep riding. Take steps to cool down while you're still thinking clearly. Take a break in the shade or stop at a convenience store and buy a bag of crushed ice to stuff inside your jacket. The melting ice water will soak your gear and provide evaporative cooling even after the ice is gone.

Route planning

In general, higher elevations are cooler. If it's really hot down on the valley floor, consider an alternate road with a higher (cooler) elevation. Sometimes you don't have any alternative other than crossing a desert, but you can adjust your schedule. One tactic is to hibernate at a cool motel during the heat of the day and head out after dark, when the temperature is lower.

Adjust your thinking

If you live in a temperate area where the thermometer seldom rises above 90 F, you need to readjust your thinking for those forays into hotter territory. Remember, insulate your skin from the sun and hot air, use evaporative cooling around your neck and drink lots of water. Oh yeah, and learn to ignore the stares of other motorists and dehydrated bikers who think you're crazy to wear heavy gear on a hot day.

LUCK ISN'T A SAFETY PLAN

CHIEF WARRANT OFFICER 3 BRIAN FITZGERALD
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To prevent accidents, we need to take a link out of the chain of events that lead to the mishap. The accident I discuss in this article could have easily ended differently. And while luck is not part of the Army Safety Program, this event happened to have some good fortune.

The event was an engine replacement on a UH-60A Black Hawk. After a test flight, the engine needed adjustment, and the mechanics found hardware that presented a foreign object damage threat lying under the engine inlet cowling. The FOD could have been ingested into the engine if a hard left bank had been initiated. Let's go over the series of events that led to this incident.

Originally, the engine was to be replaced. During the removal maintenance process, hardware that could be reused was supposed to be tagged to stay with the equipment it supported. Evidently, one bag of hardware was not properly attached to its part. Due to the number of new, inexperienced mechanics, this maintenance process was overlooked. Is it possible that the remaining senior mechanics got overloaded with work and did not shadow the new mechanics?

The next series of events occurred during the installation process. After the engine was replaced, the outer components and covers were installed. A seasoned mechanic would have questioned the engine inlet cover hardware not being attached to it. However, a less experienced mechanic did not question this and looked up the hardware in the parts manual. He then installed the cover with the new hardware.

The next link in the series of events took place when the mechanic's completed work was examined by a technical inspector. If a technical inspector looked at the work and saw all new hardware on a component being reinstalled, this should have caught their attention. However, it was not noticed during the process. The technical inspector then signed off the final inspection on the work completed. Was the technical inspector in a hurry or overloaded?

Then the final link in the chain of events happened. After the maintenance is completed, the pilots receive the log book with the maintenance records and complete the preflight process. The only problem with this incident was the inlet cover concealed the bag of hardware sitting on the upper pylon area. It would be difficult to see unless the cover was removed. The test flight was performed and the aircraft went to the next phase.

After the maintenance test flight was completed, other items needed adjusting. When the mechanics removed the covers, they discovered the hardware lying under the engine inlet cowling. This halted the maintenance process and grounded the aircraft. A FOD check was conducted on the entire aircraft before anything else was completed. This caused a work stoppage to account for all tools and hardware to ensure nothing else was overlooked. The deadline for the engine maintenance was pushed back until a safety check was completed, which caused problems in scheduling the aircraft. If the job had been performed correctly the first time, it would not need to be done a second time.

Let's review the items that led to this event: The new mechanic overlooked steps during the teardown process. Then, during the installation process, another mechanic overlooked the hardware not being attached to the part for reinstallation. The technical inspector did not question the new hardware on the component during inspection. The technical inspector did not look at the area before the part was installed. The pilots did not complete a thorough preflight.

If the engine did not need adjustments, how long would the hardware have remained on the deck? Since luck was a part of this chain of events, we won't have to wait and see. With this example, be sure you take the link out of the events and don't make your safety depend on luck.

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THE HUMAN CHOCK BLOCK

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I am a mechanic by trade, but I paid my dues and worked my way to floor chief as a sergeant at a headquarters battery. Experience has taught me to read the maintenance manual every time I work on my vehicle. It lists the dangers that can be involved with any of the components on which I may be working. This is also true for the maintenance manuals that deal with the items in the Marine Corps' — or any other branch of the armed forces — inventory. A close call while preparing for a field operation served as a reminder of just how important it is that we do our jobs by the book.

It was that time of year some Camp Lejeune Marines in artillery dread — Operation Rolling Thunder, a field op at Fort Bragg, North Carolina. It's not that Marines of different military occupational specialties can't prepare or operate in the field. Can't is not in a Marine's vocabulary. This operation was dreaded because it meant a lot of extra work behind the scenes (which no one up top seems to understand unless they are familiar with logistics and support). It also meant more road time for operators moving gear back and forth, and more miles on some of the equipment. At the time, we had various pieces of rolling stock, which included several of the infamous Dragon Wagons — the MK 48/16 Logistics Vehicle System and M870 trailers.

After a certain number of miles, the brakes on the M870 need slack adjustment per the maintenance manual at that time. The shop chief wanted these adjustments done after every drive to and from Fort Bragg, so two mechanics worked on either side of the trailer as it was pulled into the maintenance bay. At the same time, quality control personnel would inspect the vehicle for defects before loading it for the next day's run. This was also per the maintenance and operations manual preventive maintenance checks and services schedule.

As Mechanic A was finishing the work on his side of the trailer, and before QC could perform its inspection, a situation arose where an LVS was needed for another task. Since the other two LVSs were unavailable, the one in the bay had to be used. Mechanic A was tasked with unhooking the power unit and getting it over to the trailer that needed to be moved. Mechanic B was still conducting the slack adjustments under his side of the trailer when Mechanic A released the king pin and, on his way to the cab of the power unit, picked up the prescribed chock block and placed it on the fender. As Mechanic A was getting into the cab, he hit the trailer parking release button to push the air that was still left in the air tank system to the trailer brakes.

As the gooseneck of the M870 trailer slid down the skids, it came to rest on top of Mechanic B, who was lying between the tires on the driver's side of the LVS. I was tending to other concerns on the floor when I heard the expletives exploding from Mechanic B as the weight of the trailer was coming to rest on top of him.

Several of us ran to Mechanic B while Mechanic A raced back to the front of the vehicle in an attempt to start the engine to build up air to move the LVS. Mechanic A had forgotten he had unlocked the king pin from the fifth wheel. Mechanic C noticed the dog down chains were still looped into the tie down rings and brought this to the attention of the other mechanics attempting to push the trailer to release some of the pressure on Mechanic B's ribs. Mechanic D jumped up to make sure the chains were connected as Mechanic C quickly rushed to get to the overhead crane controls to move it over what would be the chain's apex point. With Mechanic C's calm thinking and observation and problem-solving skills, we hoisted the trailer off Mechanic B. He was escorted to the battalion aid station and the incident was reported.

This accident taught us the importance of getting back to the basics. First, communication is important between mechanics working on a piece of equipment. Second, chock blocks are required under any piece of equipment a Marine is working on, including a trailer. Third, make sure no one is lying beneath a piece of equipment you are connecting or disconnecting from a vehicle. Lastly, if you're working on a vehicle as a team, help the other mechanic finish their work unless you are reassigned. Until that time, continue to do what you can until both of you are finished.

So what happened to Mechanic B? Amazingly, he returned to us the same day with a diagnosis of bruised ribs. How can this be, you ask? Well, he was a big, corn-fed hoss from the Midwest. This accident might have been worse had he not been so stout or had a smaller build. In the end, we all learned an important lesson, and Mechanic B gained a new story to tell about how he became a human chock block.

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BREAKING THE CHAIN

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It was an average summer day in August 2008. I was halfway through my shift when the State Patrol Communications Center sent notice of a head-on collision involving injuries on a heavily traveled highway in northeastern Washington state. As a state trooper with the Washington State Patrol, I was quite familiar with the dangers associated with this two-lane road. I advised SPCC that I was en route and proceeded to the scene with my lights and siren going.

As I neared the scene, both north and southbound traffic was backed up nearly a quarter of a mile. Fire and emergency medical personnel preceded me to the scene and were working to extricate the driver of a small passenger car. The crash scene was like many I had seen before. Physical evidence showed the small passenger car was traveling north and then left the roadway to the right. The driver appeared to have overcorrected and crossed into the southbound lane, colliding with a full-size SUV. Fortunately, the SUV's driver and passenger were wearing their seat belts and their air bags deployed. Both suffered only minor injuries.

The relevance of this story begins when I approached the small passenger car. Fire personnel had used the Jaws of Life to open the driver-side door and were placing the driver onto a backboard. The driver appeared conscious and alert. His head was bleeding and he had a suspected broken wrist. The driver's hair was cut short and he displayed an obvious military bearing. I immediately knelt beside his head and asked, "Are you a Soldier?" He answered with a shaken, "Yes, sir." As I spoke to him, I noticed the telltale signs of impairment (bloodshot, watery eyes; slurred speech; and a strong odor of intoxicants). I asked the Soldier how much he had to drink. Before responding, he began to sob and said, "I'm sorry, sir."

As medics continued to prepare him for transport, the Soldier repeatedly inquired if the other people were OK. I reassured him of their status, trying to provide some relief. I continued my investigation, asking the Soldier questions about the vehicle he was driving, his license status and general inquiries as to what he remembered happening. All the while I was slipping in questions about his military service.

What I found out was deeply saddening. The Soldier was a National Guardsman recently back from a tour in Iraq. Prior to deploying, he was cited for a violation which involved a collision in a neighboring state. The Soldier failed to respond to the minor infraction, resulting in the suspension of his license. Even upon return from Iraq, the Soldier never contacted the court to adjudicate the matter. In the meantime, the Soldier stated he had resorted to alcohol as a means to escape some personal issues.

The car he was driving belonged his girlfriend's father. Upon talking with the owner, he stated he never gave permission for the Soldier to operate the car, which was not insured. As far as the collision details, the Soldier stated he dozed off, resulting in the vehicle leaving the roadway. As the vehicle rolled across the rumble strips, the Soldier said he woke up and overcorrected. The vehicle did not have air bags, and the force of the collision resulted in a breach of the occupant area. The steering wheel was forced into his chest as the left-front part of the vehicle crumpled inward. It was clear to me that wearing a seat belt saved his life.

The Soldier admitted he had been drinking most of the day and should not have driven the car. A portable breath test device indicated his blood alcohol concentration was twice the legal limit of .08. Based on all the facts, the Soldier was placed under arrest for driving under the influence, driving with a suspended license and operating a motor vehicle without liability insurance. A legal blood draw was performed in the back of the ambulance. Prior to leaving, the Soldier shook my hand and said, "I'm really sorry, sir."

This was not the first time I had to enforce serious traffic offenses on military personnel. But for some reason, this young Soldier made a lasting impression on me. My understanding of accidents is simple. Each one is a caused occurrence — a chain of events leading to an end result. From beginning to end, the events are connected like links in a chain. If, at any time, a link is broken, the accident is prevented. Just as in this case, if any of the sequence (links) of events had been broken, this Soldier would not be facing legal and medical problems.

As a graduate of the Aviation Safety Officer Course, I found myself applying the steps of risk management to this case. What if this Soldier had identified the hazards of driving drunk? What if he'd assessed the dangers he posed to himself and other motorists? What if he'd thought about the legal trouble he'd get into driving on a suspended license in an uninsured car? If he had, maybe he

wouldn't have found himself being cut out of a wreck while asking me if the people in the other car were all right.

Fortunately, no one died and the Soldier had plenty of time to do the final step of risk management — supervise and evaluate — while recovering from injuries and facing legal actions. What kind of grade do you think he gave himself?

How about you? What kind of grade will you get the next time you're drinking and thinking about getting behind the wheel? Why not avoid this Soldier's mistakes and manage the hazards with risk management before they end up managing you.

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BREAKING THE CHAIN

CHIEF WARRANT OFFICER 4 JOEL GORDON
Detachment 51, Operational Support Airlift
Joint Base Lewis-McChord, Wash.

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ONE CLEAR SPRING DAY

CHIEF WARRANT OFFICER 3 ANDRE LAVALLEE
Company B, 2/149 Aviation
Grand Prairie, Texas

The last thing you want to hear from the backseat while flying an instrument approach in an AH-64 is, "Oh, crap! I've got the controls!" But that's exactly what I heard just before a steep-diving left turn. I think my heart was in my throat.

I was assigned to fly an instrument training flight with a relatively new pilot in command. I think we had less than 1,000 hours of flight time combined. I was two years out of flight school, and he was less than three. As pilots in the National Guard, we don't get the flight hours full-time pilots get, but we make do.

Our flight plan took us to three airports with three different instrument approaches and then back home. Two of the three were uncontrolled airfields within our training area, so I was comfortable flying in and out of them. That, in hindsight, may have added a hint of complacency.

The flight started out great. It was a gorgeous spring day without a cloud in the sky. The air was smooth and it seemed like you could see forever. This probably added to our overly relaxed demeanor. As we flew at 3,000 feet mean sea level, I saw our first airport and set up the cockpit for a direct-entry nondirectional beacon approach followed by the published missed approach. This was the first of the two uncontrolled airfields we planned to visit on the mission.

We made our radio calls, and I shot the approached and the missed approach and held on the NDB for two turns. After a short debrief on the maneuver, I handed over the controls to the PC in the back seat to make the next approach. It was into a controlled airfield, and we received vectors to a precision approach radar approach.

I maintained my scan, but there was only one other aircraft in the pattern. We were under positive control, so I found myself inside on the instruments a few times during his approach. The PC executed the missed approach and we headed to our last airfield before heading home. I would be flying this last approach, so I set up the cockpit while he flew.

The NDB was on the uncontrolled field, so I decided to overfly the fix and fly outbound, conduct a right procedure turn and then fly back inbound for the approach. I took the controls and trimmed the helicopter for 3,000 feet MSL. At about 2,000 feet above ground level and 110 knots airspeed, I made my common tower advisory frequency call at 10 miles out, followed by another at five miles, then crossed the fix and turned left to track an outbound heading.

It seemed like only seconds passed before I heard the dreaded phrase from the backseat. I looked up immediately and saw the flash of a twin-engine airplane in a steep left bank. I swear to this day that I could see the pilot's eyes, which were probably as wide as mine at that exact same time.

Luckily, this was only a near miss; but on the flight home, there was absolute silence. During the debrief, we discussed what happened. We decided the pilot in the other aircraft was most likely not making the required radio calls or using the wrong frequency. More importantly, we discussed that I hadn't made my required radio call when I crossed the fix. The PC also admitted that he was inside monitoring my performance with the instruments. No one was maintaining visual flight rules separation with a visual scan.

It is very easy to be lulled into complacency when you are at a familiar airfield in great weather on your last approach. Unfortunately, all too often that is exactly when accidents occur.

Fortunately for us, the other pilot saw us about the same time we saw him, so this was only a near miss, but I still replay that scenario over and over in my mind. Hopefully you can learn from my experience.

LAST RUN

RETIRED STAFF SGT. GLYNDON G. MURPHY
Marine Corps Base Camp Lejeune, Safety Department
Camp Lejeune, N.C.

Marines, sailors, Soldiers and airmen have many things in common, one of which is running. Some run only when it is time for their physical fitness tests, while others may run as a hobby. Regardless the reason, running is a part of who we are as service members. I didn't realize how big a part of my life it was until it was taken away.

It was the day that would change my life forever. I had decided to relax with a run in the beautiful North Carolina weather, so I put on my PT gear — ensuring I was wearing lightly colored attire — tied my running shoes and took off out the door. I'd been taught as a child to walk and run facing traffic to ensure you have time to react in the event something comes toward you. On this day, however, the side of the road that I normally ran on was blocked off by the Department of Transportation for repair. This gave me a bad feeling, but I decided it was probably just due to my normal routine being disrupted.

I decided the safest place to run would be the grass adjacent to the road shoulder. That would give me a buffer zone from the traffic that would be coming from behind me. With my earbuds in and music cranked to block out the road noise, I took off. I was about a mile and a half into it when everything went black.

Four days later, I woke up in the hospital. I had no idea what had happened and why there were restraints on my wrists and legs. I began to panic. I wanted to know why I was there. A nurse entered my room and instructed me to remain still. It was then that I looked down and noticed my stomach was swollen like a basketball. I also had an 18-inch row of staples running down my mid-section.

The next several days were a blur. When I was finally more alert, a nurse explained what had happened to me. Based on witness reports, she said a car struck me from behind while I was running, leaving me with several crushed vertebrae in my spinal column. Had I not been in such good shape thanks to my military PT, the doctors believed I would have very likely spent the rest of my life in a wheelchair.

The road to recovery was excruciating, and at times I wanted to give up due to the intensity of the pain that radiated throughout my body. For the first several months, I was heavily medicated as I used a wheelchair and walker to assist me in walking laps around the floor. Eventually, I was placed in a brace that covered my entire back and most of the front portion of my body. Fortunately, my recuperation was faster than the doctors and surgeons expected. I attribute this to the warrior's ethos of never giving up and continuing to keep in the fight no matter what.

When I was released from the hospital, I was relieved that I could finally rejoin my loved ones and continue my rehabilitation at home. Getting adjusted to not being able work and lead my junior service members, however, was very difficult for me to accept. I loved serving my country and leading troops. I felt as though my entire identity had been stripped away from me. As you can imagine, I went through a period of sorrow. That sorrow turned to anger, though, when I was told the young man who struck me with his car had likely been texting while driving. All of this might have been avoided had he chosen to not drive distracted.

Running is a great sport and an excellent stress reliever — at least it was until the day of my accident. I learned some valuable lessons from this experience that will stick with me forever. First, if you are unable to run on a trail or sidewalk, pick a route or path that keeps you protected from traffic. Second — but equally important — be aware of your surroundings at all times. Third, make sure you wear a reflective belt and lightly colored clothing to make yourself more noticeable. Fourth, unless you are on a designated running trail, leave the earbuds at home. Had I not been wearing mine that day, I might have heard the vehicle approaching.

The final lesson I learned didn't come from my perspective as a runner, but as a driver. I now know, with certainty, that no one should ever text while driving. There are already enough distractions on the road, like pedestrians. Be proactive rather than reactive. You don't want your next run — or someone else's — to be the last.

FYI

The Road Runners Club of America offers the following tips to help keep you safe when running:

- Don't wear headphones. Use your ears to be aware of your surroundings. Your ears may help you avoid dangers your eyes may miss during evening or early morning runs.
- Run against traffic so you can observe approaching automobiles. By facing oncoming traffic, you may be able to react quicker than if it is behind you.
- Look both ways before crossing. Be sure the driver of a car acknowledges your right-of-way before crossing in front of a vehicle. Obey traffic signals.
- Carry identification or write your name, phone number and blood type on the inside sole of your running shoe. Include any medical information.
- Always stay alert and aware of what's going on around you. The more aware you are, the less vulnerable you are.
- Carry a cellphone or change for a phone call. Know the locations of public phones along your regular route.
- Trust your intuition about a person or an area. Act on your intuition and avoid a person or situation if you're unsure. If something tells you a situation is not right, it isn't.
- Alter or vary your running route pattern, but run in familiar areas if possible. In unfamiliar areas, such as while traveling, contact a local RRCA club or running supplies store. Know where open businesses or stores are located in case of emergency.
- Run with a partner. Run with a dog.
- Write down or leave word of the direction of your run. Tell friends and family of your favorite running routes.
- Avoid unpopulated areas, deserted streets and overgrown trails. Avoid unlit areas, especially at night. Run clear of parked cars or bushes.
- Ignore verbal harassment and do not verbally harass others. Use discretion in acknowledging strangers. Look directly at others and be observant, but keep your distance and keep moving.
- Wear reflective material if you must run before dawn or after dark. Avoid running on the street when it is dark.
- Practice memorizing license tags or identifying characteristics of strangers.
- Carry a noisemaker. Get training in self defense.
- When using multi-use trails, follow the rules of the road. If you alter your direction, look over your should before crossing the trail to avoid a potential collision with an oncoming cyclist or passing runner.
- Call police immediately if something happens to you or someone else, or you notice anyone out of the ordinary. It is important to report incidents immediately.

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TRAVELING TIME BOMB

MATT TANNER

As Soldiers, time and again we hear about the dangers of drinking and driving. In an effort to combat it, some commanders have even set up programs to help pay for taxis and concierges in case their Soldiers' safe-ride plans fall through. While this is an excellent idea, I wonder why increased emphasis isn't placed on other dangerous driving situations. While I definitely agree drinking and driving is bad, I believe there is a more common activity that not only rivals it, but possibly surpasses it in danger — fatigued driving.

National Highway Traffic Safety Administration statistics indicate drowsy driving causes more than 100,000 vehicle crashes a year, resulting in about 71,000 injuries and 1,550 deaths. Those stats may be only the tip of the iceberg, however, because, according to NHTSA, drowsy driving is underreported as a cause of crashes. A National Sleep Foundation poll revealed that 60 percent of adult drivers say they have operated a motor vehicle while drowsy during the past year. I'll admit that I've been guilty of it too. Here's an example.

After being released from work one afternoon, I hopped in my already-packed car and started a 12-hour journey across this great nation. The trip started out easy enough, and the hours seemed to fly by. But as night approached, the drive got dreary and I was having problems focusing on the road. I tried all the classic techniques to stay alert like rolling down the window, turning up the music and chewing gum, but nothing worked. Eventually, I resorted to relying on the rumble strips to help me stay awake. Still, I could barely keep my eyes open and my reaction time was significantly delayed. I was showing the classic signs of fatigue. I'd become a traveling time bomb, just waiting to explode.

Fortunately, I was able to make it to my destination without causing an accident. But this trip could have easily ended differently. People like me, who work different shifts or are constantly traveling through numerous time zones, are at higher risk of a driving accident due to fatigue. It's important that we set up personal boundaries so we can avoid this dangerous situation. After all, driving drowsy is on par with driving drunk and has killed more people than it should.

According to the American Automobile Association, there are several warning signs to drowsy driving, including:

- The inability to recall the last few miles traveled
- Having disconnected or wandering thoughts
- Having difficulty focusing or keeping your eyes open
- Feeling as though your head is very heavy
- Drifting out of your driving lane, perhaps driving on the rumble strips
- Yawning repeatedly
- Accidentally tailgating other vehicles
- Missing traffic signs
- The NSF recommends motorists take the following countermeasures before hitting the road:
- Get adequate sleep. Most adults need seven to nine hours of sleep to maintain proper alertness during the day.
- Schedule proper breaks. Plan to stop about every 100 miles or two hours during long trips.
- Arrange for a travel companion. Bring someone along to talk with and share the driving.

• Avoid alcohol and sedating medications. Make sure you check the warning labels on medications or ask your doctor of potentially dangerous side effects.

Above all, if you find yourself getting sleepy behind the wheel, find a safe place to pull off the road and get some rest. I'm sure your friends and loved ones would much rather you arrive a little late than not at all.

Now that I'm older, I realize that if I fall asleep at the wheel, I'm not only endangering my life, but the lives of everyone I encounter on the road. Sadly, that's a lesson some will have to learn the hard way. We must keep an eye out for these individuals and educate them on the dangers of driving fatigued before it's too late. We are our brothers' and sisters' keepers. Let's do everything we can to keep them alive!

RISK VS. REWARD

COMPILED BY THE KNOWLEDGE STAFF

It was a typical morning with the sun rising over the Iraqi horizon. My team finished the required briefs and, while walking back to the command post for our team brief, noticed weather approaching the field. Dust was building on the horizon to the west. We had seen this before and knew what was about to happen.

We went in the CP and conducted our team brief. We then called weather for the forecast. The briefer gave us no ceiling with unrestricted visibility. The crewmember that was getting the brief kept asking the weather personnel about the dust to the west. Just like many times in the past, we received this response: "No, it is good. Nothing developing."

We discussed the weather. We knew a dust storm was building and would move in, but the weather personnel seemed to have a problem with actually walking outside to take a look at conditions instead of just briefing a slide. That is when you have to make a decision on whether it is worth it to launch and possibly go instrument meteorological conditions. After deliberating a few minutes more, we decided to proceed so we didn't have to deal with the repercussions of not launching with a legal weather brief.

We made it out to the aircraft and conducted our preflight check. During our crew brief, we tracked the dust as it got closer and closer. The air mission commander decided we would crank and call weather. I told him I would contact weather as soon as we got up to 100 percent power.

When we were cranked and at 100 percent, the 2,000-foot wall of dust was about one mile from the airfield and headed our way. That's when the AMC called and said shutdown, we were done for the day. I told him I would call and make a pilot report to the weather office and let them know what was inbound.

When I called the weather office and told them what was about to hit, they started to tell me that the dust was not there and they were sticking by their original brief. When the briefer was reading it again to me, weather conditions dropped to zero/zero on the parking pad with high winds. I called weather back on the radio and told them that I was zero/zero at the north end of the airfield. The weather personnel then decided to walk out and look at the weather conditions.

My lesson learned is that I won't always believe what is being briefed versus what I am seeing. Sometimes, you have to use common sense when you see something that is not right. Remember, as a pilot in command of an aircraft, you have to determine the risk versus reward in everything you decide to do. Although it might be legal, is it smart? It will ultimately be your fault if something happens.

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PLAY IT SAFE

CHIEF WARRANT OFFICER 5 DIRK MARKESTEIN
U.S. Army Forces Command, Aviation Resource Management Survey
Fort Bragg, N.C.

As Soldiers in Aviation, we are tasked to operate many pieces of equipment. We are trained, evaluated and licensed. We are taught how to assess risk, mitigate it and use the best courses of action to accomplish the mission. However, dozens of Soldiers are killed every year operating a common piece of equipment — their private motor vehicle.

Years ago, I was preparing to give our annual PMV training class. As I sat there reviewing prior lesson plans, I thought about my target audience (a headquarters and headquarters company with about 60 enlisted personnel and two companies with another 70 personnel, mostly warrant officers). The common theory is you lose your audience after 15-20 minutes, so I wanted a brief class with the most important information detailed up front. I turned to my safety background and began investigating. Here's what I discovered.

Aviation units, when compared to other units in the Army, fared better when it came to PMV accidents, meaning they had fewer incidents across the board. I contributed this to our consistent safety awareness and risk management training. (Hey, maybe people really did listen to those classes!) We are always doing risk assessments, even without thinking about it, so maybe being constantly educated about it means our process is a little more refined.

However, the same group as civilians, 18- to 25-year-old males, is more likely to be in a PMV accident. There are many possible reasons for this: maturity, experience, motivation, less risk adverse or more willing to take risk, etc. As a longtime motorcycle rider (40-plus years), I still think it is amazing that just about anyone with $12,000-15,000 can buy a motorcycle capable of racing a quarter mile in less than 10 seconds and a top speed of more than 180 mph. No special training is required for these civilians.

After identifying the groups that are involved in these accidents, I started looking for the root factors behind them. One source I used was the preliminary loss reports. After all, what better way is there to learn than from reading about other people's mistakes? What I learned was there is at least one of four factors present in every PMV accident. (I have since upgraded that to six factors, but more on that later.) I figured if we could avoid all these factors, we could almost eliminate our PMV accidents. I told the class they needed to always think SAFE:

Speed factor — traveling too fast for conditions, be they mechanical or environmental, or capabilities.

Alcohol factor — people still operate a vehicle with alcohol in their system; you are not at 100 percent!

Fatigue factor — you are too tired; reflexes and thought processes are not optimum.

Early morning hour factor — a large percentage of PMV accidents occur between midnight and 6 a.m., so beware!

As we identify the presence of these factors, we can adjust our situation and mitigate the effects for each as they relate to us. However, we must always be defensive because we know there are others we share the road with that have not identified or mitigated the effects of these factors. We must plan courses of action for how we can avoid or mitigate their irresponsibility.

Now, what about those additional two factors I mentioned earlier? They're talking and texting, or TT. Every day I see people going off the road, rear-ending cars and generally causing hazards because they insist on talking or, even worse, texting on their cellphones. Do the math here: traveling 45 mph equals 66 feet per second to come to a stop! That's four to six car lengths you travel in one second, depending on what is in front of you.

So that's it — SAFE-TT. Apply SAFE-TT to your PMV operations and you may save yourself from an accident. Also be aware of others that are violating the principles of SAFE-TT. Need more evidence? Well, here's a sad story about how ignoring SAFE-TT can affect you.

My unit administrator told me we had a new member reporting to our unit the following Monday and asked if I could schedule him for a newcomer's safety brief. A few days later, the UA came back to my office and notified me that the very same Soldier was

dead. So we had a Soldier who had never set foot in our unit area, but was assigned to us, dead. I started the Serious Incident Report after notifying all the required personnel.

Upon investigating the cause of his death, this is what I discovered: The Soldier had gone out with his friends to celebrate his 18th birthday. Afterward, he realized he was impaired, so he wisely chose to not drive home and stayed at his buddy's house. However, at 2 a.m., he decided he was now sober enough to drive. We had just experienced the first rains of spring, and the roads were a slick. As the Soldier took a turn at an intersection doing what the police determined was 55-plus mph on a 35-mph road, he lost control of the vehicle and slid sideways into a light pole. The report stated his "occupied living space was compromised." In other words, the driver's door was now in the passenger seat. He was killed instantly.

As I finished the report, I shook my head. Speeding, alcohol, fatigue and early morning hours — he had all four factors! Since that day, I've wondered if my PMV brief would have made a difference had I had a chance to give it this Soldier. Would he be aware of these factors and adjust his behavior? I don't know, but I am determined to learn by his mistakes. I hope all you are too. Be safe! Apply SAFE-TT to your lives!

WHO AM I TO SAY ANYTHING?

CHIEF WARRANT OFFICER 4 MICHAEL SNOW
1-126th Aviation
Rhode Island Army National Guard
North Kingstown, R.I.

Back in flight school, they told us it would happen. They also said it would likely occur right away, before we had a chance to settle in to our new careers. Perhaps you also remember the scenario: you, the new warrant officer flying with the seasoned veteran and how you should recognize the links in a chain of events that build to what could be a calamity. I remember the instructors saying, "Don't be afraid to speak up — no matter who you're flying with." In my case, it turned out I wasn't even 10 hours into my first assignment when the scenario played out on a sunny fall afternoon.

While working on readiness level progression upon returning to my National Guard unit after flight school, I was scheduled to fly with a full-time instructor pilot who was also the battalion commander. I felt a little intimidated as we prepared for the flight, but I was confident in my abilities, and the battalion commander seemed cordial enough. The mission involved aircrew training manual activities in the morning followed by paradrop operations that afternoon at a drop zone about 10 miles west of the airfield. We would complete as many paradrops as possible on a single fuel load and return before the afternoon down time.

The weather was beautiful, but winds were forecast to increase later. We spent the morning at the airfield completing a number of base flight tasks without incident. Following lunch, we collected our crew chief and headed to the DZ. As we approached to land, we established radio contact with the DZ and were told the supported unit had about 30 parachutes and hoped to use them all. Risking some "public math," I confidently announced that, at four jumpers per lift, we should be able to complete the mission in eight trips around the pattern. Assuming 15 minutes per, I quietly concluded that fuel would be tight but not a showstopper.

Upon arrival at the pick-up zone, we shut down the Huey, completed our premission briefs and distributed the monkey harnesses that would become one of the links in the event chain that led to the problem later that afternoon. The training called for the jumpers to be dropped in groups of four from an altitude of 1,500 feet above ground level. The initial drops went off without a hitch as we refined our altitude and flight track to ensure the jumpers impacted the drop target. By the third drop, we had our timing down to the point that we were touching down just as the jumpers were landing on the DZ. Things continued to progress well as we departed for our eighth and, what I thought, final drop.

As we completed the drop and began our decent, the master caution flickered. I glanced down to see the low fuel light flickering as well. I remember thinking it was no big deal since we would be on the ground in a minute and home within 10.

As we touched down, the radio sprang to life. It was the jump controller, who said he had three more parachutes and asked if we would take the jumpmasters up for one final drop. The battalion commander pondered the fuel gage, and, to my surprise, said, "Sure, we'll take them."

As the jumpers piled on, I remember thinking this felt like one of those chain-of-events scenarios, but who was I to say anything? As we climbed out on takeoff, the master caution light illuminated again. However, this time it did not extinguish. I reached down and started the minute tracker on the dashboard clock.

As soon as I started the clock, a request from the rear came over the intercom. These guys wanted to go to 3,000 feet AGL rather than the briefed altitude. Again, I was surprised when the battalion commander agreed, but who was I to say anything? I saw he was doing his best, but it took extra minutes to reach the desired altitude. As we rolled out on our established ground track, I remember thinking that we probably should alter the drop point now that the altitude had changed, but who was I to say anything?

The jumpers departed on command and slowly drifted toward the DZ as we completed the run and began out decent. Halfway to the ground, the jumpmaster expressed concern that the jumpers appeared to be drifting toward the tree line that fringed the DZ. Without hesitation, the battalion commander offered to slow our decent and circle to monitor the situation. I noted that four minutes had elapsed since starting the clock and felt that another link had clearly been added to the chain, but who was I to say anything?

After what seemed an eternity, the jumpers cleared the tree line and we made a beeline for the DZ to drop off the jumpmaster and collect our harnesses. When we landed, I could clearly sense the concern in the crew chief's voice as he quickly chased out the jumpmaster and attempted to collect our gear. Nobody on the ground knew where it was, and those who did know were just now touching down some 500 meters away. As a frantic search ensued, I remember thinking we should just leave it, but who was I to say anything?

Suddenly, the crew chief entered the cabin and announced that he had the gear and the aircraft was clear. As we lifted off, I again glanced at the clock. I could clearly see that 12 minutes of our 20-minute low-fuel light had elapsed since it came on steady. Focusing my attention out the windscreen, I could see the large hangar that marked our destination was still about eight miles away. I also noted that a direct flight path would take us over a no-fly residential area and a mile or so of ocean. As the crew chief started mumbling over the intercom, I adjusted my water-wings, said a quick prayer and questioned why I didn't say anything.

During the next few minutes, we made it over the residential area, the open ocean and the large hangar that marked home. Once clear of it, we made a rapid descending decelerating turn to land directly to a parking pad. As the aircraft skids settled to the asphalt, I reached down and stopped the clock. It read 17 minutes. I remember feeling both relieved and angry as the rotor blades coasted down, but who was I to say anything?

The fuelers put 205 gallons of JP-8 into that aircraft that afternoon. I did some more mental math on my drive home and concluded that the so-called 20 minute fuel light was about right that day. I remember being upset and disappointed in myself for not saying anything. Clearly the links presented themselves one at a time. Stopping any one of them could have avoided a very stressful and dangerous situation.

Two years later, that same lieutenant colonel was part of a crew that ran an aircraft out of fuel. Fortunately, no one was hurt in the resultant Class C accident. I remember sitting through the post-accident briefing 20 years ago and recognizing the links as they strung together leading to that accident. Although the specifics were different, the thought process was eerily similar to my earlier flight. To this day, I am convinced that the later accident could have been avoided had I spoken up, but who was I to say anything?

ACCIDENT BRIEFS

AVIATION

UH-60A
Class A
A flight of two UH-60As were ground taxing to the parking area when the lead aircraft contacted a fiberglass light pole with the main rotor system. The pole reportedly shattered, and flying debris damaged the trail aircraft, as well as other parked fixed-wing aircraft.

RQ-7B
Class B
The crew experienced a flap servo failure during flight training, and the system reportedly exceeded its roll tolerance during recovery. The aircraft descended to the ground inverted and was recovered with damage.

GROUND

Personnel Injury
Class A
A Soldier was found unresponsive under a 250-pound barbell in the barracks common area/improvised weight room.

A Soldier died after collapsing during the walk portion of his physical fitness test.

A Soldier died from injuries suffered during an airborne drop.

DRIVING

PMV-4
Class A
A Soldier riding as a passenger was killed when the driver lost control of the vehicle and struck a concrete barrier.

A Soldier died when the vehicle he was riding in overturned at an off-road area.

PMV-2
Class A
A Soldier was killed when, while operating his motorcycle at excessive speed, failed to negotiate a curve, ran off the road and was thrown from the bike. The Soldier was wearing his PPE.

A Soldier was killed when his motorcycle was struck by a vehicle. The Soldier was wearing a helmet.

A Solder died when he lost control of his motorcycle and was thrown to the ground and struck by an approaching vehicle.

A Soldier was killed when his motorcycle collided with a vehicle that turned into his path. He was wearing full PPE and was licensed and trained.

A Soldier died after he lost control of his motorcycle and struck a wooden post. He was wearing his PPE and was trained.

A Soldier died when he crashed his motorcycle into a guardrail.

A Soldier was killed when he lost control of his motorcycle on an unlit road and struck a stone wall.